TRANSMITTAL OF APPEAL BRIEF (Large Entity)

Docket No. 12.023011

In Re Application Of: **Hung**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/827,371	04/06/01	Flood, Michele C.	0000 38732	1655	3897

Invention: **Increasing Retrievable Fluid from a Breast Duct**

COMMISSIONER FOR PATENTS:

Transmitted herewith is the Appeal Brief in this application, with respect to the Notice of Appeal filed on:
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Dated: **August 22, 2007**

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Attorney's Docket No. 12.023011

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re:	David HUNG	Group Art Unit: 1655
Appl.	No.:09/827,371	Examiner: Michele C. Flood
Filed:	April 06, 2001	
For:	INCREASING RETRIEVABLE FLUID FROM A BREAST DUCT	

August 22, 2007

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Sir:

This Appeal Brief is filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences" filed May 30, 2007.

Real Party in Interest.

The real party in interest in this appeal is Cytyc Corporation, Inc., the assignee of the above-referenced patent application.

Related Appeals and Interferences.

There are no related appeals and/or interferences involving this application or its subject matter.

Status of Claims.

Claims 1, 6, and 22-27 are pending in the application. Claims 1, 6, and 22-27 have been rejected. Claims 2-5, 7-21, and 28-33 have been cancelled.

Claims 1 and 6, 7, and 22-27 were rejected under 35 U.S.C. § 112, first paragraph as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or which it is mostly nearly connected, to make and/or use the invention.

Claims 1 and 22 were rejected under 35 U.S.C. § 102(b) as being anticipated by USP 6,221,622 to Love *et al.*

Claims 1, 6, 22, 25 and 27 are rejected under 35 U.S.C. § 102(b) as being anticipated by Martyn *et al.* (BioChem J, 1985, 231:321-328) as evidenced by the teachings of USP 4,339,433 to Kartinos *et al.* and USP 6,235,305 to Mullins *et al.*

The claims appear in Appendix A. No other claims are pending.

Status of Amendments.

All of Appellant's amendments have been entered.

Summary of Claimed Subject Matter.

Pending independent claim 1 of the present invention is directed to a method for increasing retrievable intraductal fluid, cells and/or other material from a breast duct of a patient, comprising: administering intraductally to the patient an agent that increases secretion of ductal fluid into a breast duct, wherein the agent is selected from the group consisting of a hypotonic solution, a buffered solution, a nonabsorbable biocompatible solution, a protein, a colloid, a sugar, a polymer, mannitol, sorbitol, glucose, glycerol, sucrose, raffinose, fructose, lactulose, polyethyleneglycol (PEG), maltodextrin, dextran, dextran 70, hydroxyethyl starch, fluid gelatin, a synthetic colloid, an antibody, a binding protein, albumin, a hormone, a natural herb, an extract from a natural herb, silymarin, a surfactant, a growth factor, oxytocin, prolactin, an organic molecule, a muscle relaxant, and a ductal orifice dilator.

A summary claim 1 may be found at pages 2, paragraph [0020] to page 3, paragraph [0026] of the specification as well as the Example Section from paragraphs [0043]-[0051].

Grounds of Rejection to be Reviewed on Appeal.

Issue 1—Whether claims 1 and 6, 7, and 22-27 are unpatentable under 35 U.S.C. § 112, first paragraph as being based on a non-enabling disclosure.

Issue 2—Whether claims 1 and 22 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by USP 6,221,622 to Love et al.

Issue 3—Whether claims 1, 6, 22, 25 and 27 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Martyn *et al.* (BioChem J, 1985, 231:321-328) as evidenced by the teachings of USP 4,339,433 to Kartinos *et al.* and USP 6,235,305 to Mullins *et al.*

Issue 4—Whether Claims 1, 6, 22, 25 and 27 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Falconer *et al.* (Endocrinology, 1977, 101(1):181-186) as evidenced by the teachings of U.S. Patent No. 4,339,433 to Kartinos *et al.*, and U.S. Patent No. 6,235,305 to Mullins.

ARGUMENT

Issue 1-- Whether claims 1 and 6, 7, and 22-27 are unpatentable under 35 U.S.C. § 112, first paragraph as being based on a non-enabling disclosure.

The Appellant has demonstrated that claims 1 and 6, 7, and 22-27 are enabled such that one skilled in the art could make or use the claimed invention.

The Examiner has maintained the rejection of claims 1 and 6, 7, and 22-27 under 35 U.S.C. § 112, first paragraph, on the grounds that the specification does not provide sufficient guidance to enable one skilled in the art to make and use the claimed invention. Claims 1 and 6-11 and 22-27 were rejected because, as the examiner stated, the specification "...does not reasonably provide enablement for the claim-designated method comprising the intraductal administration of any and all amounts of any and all agents recited in the Markush group of Claim1." (Office Action of August 29, 2006, page 3) The Appellant respectfully disagrees.

The Examiner's rejection under 35 U.S.C. §112, first paragraph is based upon the notion that one of ordinary skill in the art would be unable to make and use the entire scope of the claimed invention without undue experimentation. To support such a *prima facie* case, the Examiner stated that:

> "[w]hile Applicant has reasonably demonstrated a method for increasing retrievable intraductal fluid, cells and/or other material from a breast duct of a patient comprising the intraductal administration of an effective amount of mannitol that increases the ductal fluid onto a breast duct, Applicant has not demonstrated a method for increasing retrievable intraductal, cells, and/or other material from a breast duct of a patient comprising the intraductal administration of any and all of the agents recited in the Markush group of Claim

1 in any and all amounts to provide the claim designated functional effect to increase secretion of ductal fluid into a breast duct of a patient." (see Office Action of August 29, 2006, page 4 second paragraph).

In answer to the Examiner's objection, the Appellant argued that a claim can encompass "inoperative" embodiments so long as one of ordinary skill can ascertain this without undue experimentation (see Spectra-Physics, Inc. v. Coherent, Inc., 827 F.2d 1524, 2 USPQ2d 1737, 1743 (Fed Cir.) (Response to Office Action filed November 29, 2006). The Examiner has explicitly stated that the specification is enabled for a method of preparing for intraductal retrieval of fluid, cells and/or other material from a breast duct of a patient comprising administering intraductally to a patient an effective amount of mannitol that increases the ductal fluid collection from a breast duct of a patient (Office Action filed August 29, 2006; page 4). As such, one of skill in the art could easily conclude that the administration of other agents with similar physical characteristics as mannitol (e.g., high molecular weight; hydroscopic; etc.) into a breast duct would potentially increase the amount of ductal fluid within the breast duct. Examples of other high molecular weight hydroscopic agents can be found in the Markush group of Claim 1 such as sorbitol, glucose, glycerol, sucrose, raffinose, fructose, lactulose, and dextran to name just a few. Since the Appellant has provided the experimental protocol for the administration of agents to a breast duct, one skilled in the art would easily be able to introduce any of the aforementioned high molecular weight hydroscopic agents into the breast duct of a patient (or an animal model) to test for an increase in intraductal fluid. Such an assessment would be routinely performed in the art. Hence, inoperative embodiments encompassed by claim 1 (i.e., agents that are non-hydroscopic) could be easily identified by one of skill in the art without undue experimentation.

In the Final Office Action dated March 14, 2007, the Examiner argued that "...in view of the breadth of the claims and the lack of guidance provided by the specification as well as the unpredictability of the art, it would take undue experimentation without a reasonable expectation of success for the skilled artisan to make and/or use the instantly claimed method comprising the intraductal administration of any and all of the claim-designated agents in any and all amounts to the breast duct of a patient to provide the functional effect of increasing secretion of ductal fluid into a breast duct." (Final Office Action of March 14, 2007; page 6)

The premise of the Examiner's argument appears to be that the Appellant must demonstrate a working example of each and every agent within the limitation of the claims, and that the claimed invention is enabled only if no experimentation is required to use the claimed method. This requirement is not supported by the applicable case law. It has been consistently held that the first paragraph of 35 USC 112 requires nothing more than objective enablement. *In re Marzocchi*, 439 F.2d 220, 169 USPQ 367 (CCPA1971). In satisfying the enablement requirement, an application need not teach, and preferably omits, that which is well-known in the art. *Hybritech, Inc. v. Monoclonal Antibodies*, Inc., 802 F.2d 1367, 231 USPQ 81 (Fed.Cir.1986); *Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 1463, 221 USPQ 481, 489 (Fed.Cir.1984). How such a teaching is set forth, whether by the use of illustrative examples or by broad descriptive terminology, is of no importance since a specification which teaches how to make and use the invention in terms which correspond in scope to the claims must be taken as complying with the first paragraph of 35 USC 112 unless there is reason to doubt the objective truth of the statements relied upon therein for enabling support. (Marzocchi at 439 F.2d 223, 169 USPQ 369) To limit the Appellant to claiming

"operative" agents under the first paragraph of 35 U.S.C. § 112 in the absence of limiting prior art would not serve the constitutional purpose of promoting progress in the useful arts. *In re Johnson*, 194 USPQ 197 (CCPA 1977).

The Appellant has previously argued that operable agents would be limited due to the specificity of the methodology taught in the specification. The Examiner disagreed, stating that "[a]pplicant has identified a single operable embodiment but the claims read on significant numbers of possible inoperative embodiments and therefore the claims are rendered non-enabled because the specification ... does not clearly identify the operative embodiments..." (Final Office Action of March 14, 2007; page 9) The Examiner is quite clearly requiring that the Appellant limit the scope of the presented claim(s) to one agent (mannitol). The Appellant strongly disagrees that such a limitation is required under 35 U.S.C. § 112, first paragraph.

The statutory basis of the enablement requirement under 35 U.S.C. § 112, first paragraph requires that the specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same. *In re Goffe*, 542 F.2d 564, 567, 191 USPQ 429, 431 (CCPA 1976), the court stated: [T]o provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "operable" materials in a process such as the one herein involved would not serve the constitutional purpose of promoting progress in the useful arts. Presently, one skilled in the art, in this case biochemistry, would clearly be familiar with the kinds of agents which, when

placed within a body lumen (e.g., breast duct) would increase secretions into the lumen from surrounding tissues. Even assuming *arguendo* that there may be a large number of agents which would fail to increase secretion of ductal fluid in a breast duct, the Appellant has provided an experimental protocol for the administration of agents to a breast duct so that one skilled in the art would easily be able to introduce a large number of agents into the breast duct of a patient (or an animal model) to test for an increase in intraductal fluid. The Examiner argued that such experimentation would be undue. The Appellant respectfully disagrees.

The most important test for enablement under 35 U.S.C. § 112, first paragraph requires that the specification of a patent teach a person skilled in the art how to make and use the full scope of the invention without "undue experimentation." (*Genetech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (quoting *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993). While some experimentation may be necessary to make and use the disclosed invention, determining whether that experimentation is undue "requires the application of a standard of reasonableness, having due regard for the nature of the invention and the state of the art." (*In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988) (citing *Ansul Co. v. Uniroyal, Inc.*, 448 F.2d 872, 878-79 (2d Cir. 1971)). Factors to be considered in determining whether undue experimentation is required include the quantity of experimentation necessary, the amount of guidance provided in the specification, the presence of working examples of the invention in the application, the nature of the invention, the state of the prior art, the relative skill of those in the art, the predictability in the art, and the breadth of the claimed invention. *In re Wands*, 858 F 2d at 737, 8 USPQ 2d at 1400, 1404.

In the present case, the Examiner argues that the Appellant's claims are not enabled to their

full-claimed scope because one of the ordinary skill in the art would have had to perform "undue experimentation" to make and/or use the invention. The Examiner reaches this conclusion by weighing the eight factors as set forth in *In re Wands*, 858 F 2d at 737, 8 USPQ 2d at 1404. The Appellant disagrees that undue experimentation is required to make and/or use the present invention. A review of each of the factors analyzed by the Examiner is set forth below.

The Breath of Claims

The Examiner argued that the claims are "broad in that any and all amounts of the claim-designated agents as recited in the Markush group of Claim 1 are intraductally administered to a patient to provide a method for increasing retrievable intraductal fluid, cells and/or other material from a breast duct of a patient..." (Final Office Action of March 14, 2007; page 5) As mentioned above, one skilled in the art in biochemistry would clearly be familiar with the kinds of agents which would increase the secretion of fluid into a breast duct. As previously pointed out by the Appellant, by examining the agents listed in the Markush group of Claim 1, one of skill in the art could easily conclude that the administration of high molecular weight hygroscopic agents into a breast duct would potentially increase the amount of ductal fluid within the breast duct. Examples of high molecular weight hydroscopic agents can be found in the Markush group of Claim 1 such as sorbitol, glucose, glycerol, sucrose, raffinose, fructose, lactulose, and dextran to name just a few. Thus, the Appellant would submit that the scope of the claims is not as broad as the Examiner has stated.

Predictability and the State of the Prior Art

The Examiner stated that "...while it may [be] possible that particular agents recited in the Markush group of Claim 1 would increase the secretion of ductal fluid into a breast duct of a patient, it is highly unlikely that any and all of the claim-designated agents in any and all the amounts could increase the secretion of ductal fluid into a breast duct." (Final Office Action of March 14, 2007, page 6). The Appellant disagrees with the Examiner's assertion.

The arguments presented by the Examiner in the Office Action are not relevant to the claimed subject matter because the claims are not directed toward agents which increase the amount fluid in a breast duct but instead are directed to a method of increasing fluid in breast duct by administering certain agents which have particular physiological characteristics. Based on the guidance provided in the specification, one of skill in the art could easily perform the method of administering an agent intraductally to a patient and measuring the amount of fluid obtained. The proper test for the enablement of an invention is whether the specification provides enablement commensurate with the scope of what is claimed. In the instant case, the Appellant has provided an example (paragraphs [0043]-[0051] and Tables 3 and 4) the injection of an agent into a breast duct which results in the increase in fluid secreted in the duct. Thus, the specification has provided sufficient guidance to allow one of skill in the art to make and use the method of claim 1, and therefore the enablement requirement is met.

The Level of One of Ordinary Skill in the Art at the Time of Invention

Although not recited by the Examiner, the level of one of ordinary skill in the art at the time of invention made would be that of a person holding an advanced scientific degree.

The Quantity of Experimentation Needed to Make and/or Use the Invention

The Examiner stated that there is "...no guidance in the specification, other than the administration of effective amounts of mannitol to increase ductal fluid secretion from a breast duct. Moreover, the instant application does not provide a working example providing data which shows that the compositions of the instant claims would indeed increase secretion of fluid into a breast duct of a patient comprising the administration of any and all of the claim-designated agents in any and all amounts." (Final Office Action of March 14, 2007, pages 7). The Appellant respectfully disagrees.

The statement by the Examiner that there is no working example providing data is factually incorrect. As mentioned previously, a detailed example of the administration of an agent into a breast duct is described in paragraphs [0042]-[0049] of the specification and the results of the experiment are shown in Table III. Since the Appellant has clearly demonstrated an experimental protocol by which any agent may be injected into a breast duct and the amount of fluid collected is compared to a control, the Examiner appears to be arguing that due to the large possible numbers of agents which could be used to increase fluid in a breast duct, the quantity of experimentation to test the large numbers of agents would be undue.

The Federal Circuit has repeatedly stated that the mere fact that experimentation may be

necessary does not precluded enablement. The test for enablement is whether the experimentation is undue. (*In re* Angstadt, 537 F.2d 498, 190 USPQ 214, 219 (C.C.P.A. 1976)) The Federal Circuit has also noted that test for undue experimentation is "...not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine, or if the specification in question provides a reasonable amount of guidance with respect to the direction in which the experimentation should proceed to enable the determination of how to practice a desired embodiment of the invention claimed." (PPG Indus v. Guardian Indus, Corp., 75 F.3d 1558, 37 USPQ2d 1618 (Fed Cir. 1996)

In the present case, although some quantity of experimentation would be required, the level of experimentation would not be undue in view of the routine nature of the experiments that would be necessary to test the different agents as well as the reasonable amount of guidance provided by the specification. All that is claimed is a method for increasing retrievable intraductal fluid, cells and/or other material from a breast duct of a patient. While it may take some experimentation to determine which agents would be physiologically active, one of skill in the art, following the experimental protocol taught in the specification, would be able to easily arrive at the determination of which agents could be used by the method of the present invention. Thus, the Examiner has not established a reasonable basis for questioning the sufficiency of the supporting disclosure.

Conclusion

The test of enablement is whether one reasonably skilled in the art could make or use the invention from the disclosures in the patent coupled with information known in the art without undue experimentation. The factual considerations analyzed by the Examiner to determine whether

undue experimentation was necessary included the scope or breadth of the claims, the predictability and state of the prior art, and the quantity of experimentation needed to make or use the invention based on the content of the disclosure. During the factual examination of the specification, the Examiner made a number of incorrect assumptions and assertions including overstating the breath of the claims, incorrectly characterized the predictability and the state of the prior art, and providing no evidence that any experimentation necessary to perform the method of the present invention would be undue. Analysis of the Wands factors previously mentioned clearly shows that considering all the evidence related to each of these factors, and based on the evidence as a whole, favors a conclusion that one of skill in the art could practice the claimed invention without undue experimentation.

Accordingly, the requirements for enablement have been met, and the rejection of claims 1 and 6, 7, and 22-27 under 35 U.S.C. §112, first paragraph, for lack of enablement should be reversed.

Issue 2—Whether claims 1 and 22 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by USP 6,221,622 to Love et al.

The Appellant has demonstrated that claims 1 and 22 are novel and not anticipated by USP 6,221,622 to Love *et al.*

The Examiner maintained the rejection of claims 1 and 22 under 35 U.S.C. § 102(b), on the grounds that Love et al. teaches "...the intraductal administration of physiological saline to a breast duct for the retrieval of fluid, cells and/or other material from a breast of a patient." (Final Office Action of March 14, 2007; page 11) The Appellant respectfully disagrees.

To establish a case of *prima facie* anticipation, the single reference cited by the Examiner must describe and enable the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by persons or ordinary skill in the field of the invention. (Crown Operations Int, Ltd. V. Solutia Inc., 289 F.3d 1367, 1375, 62 USPQ2d 1917, 1921 (Fed Cir. 1984)).

Love *et al.* teaches the intraductal administration of physiological saline to a breast duct for retrieval of fluid. There is no teaching or suggestion in Love *et al.* of a method for increasing retrievable intraductal fluid, cells and/or other material from a breast duct of a patient by administering intraductally to the patient an agent that increases secretion of ductal fluid into a breast duct as recited by independent claim 1. The Examiner argued that "...physiological saline washing fluid taught by Love et al...." is a "...nonabsorbable biocompatible solution." (Final Office Action of March 14, 2007; page 11) The Appellant respectfully disagrees.

First, the Examiner appears to be arguing that saline is a nonabsorbable biocompatible solution. The Examiner has provided no evidence that physiological saline is nonabsorbable. In fact, since the saline solution is described by the examiner as "physiological", the Appellant would argue that it is inherent that such a solution is absorbable. Regardless, the Examiner has not met the burden of establishing *prima facie* anticipation by demonstrating with sufficient clarity and detail that saline already existed in the prior art as a nonabsorbable biocompatible solution.

Second, the Examiner has not demonstrated that Love *et al.* teaches or suggest an agent which increases the retrievable intraductal fluid, cells and/or other material from a breast duct of a patient. There is simply no evidence that saline increases retrievable intraductal fluid.

Thus, the Examiner has not described and enabled the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by persons or ordinary skill in the field of the invention. Accordingly, the requirements for anticipation have not been met, and the rejection of claims 1 and 22 under 35 U.S.C. §102(b), should be reversed.

Issue 3—Whether claims 1, 6, 22, 25 and 27 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Martyn et al. (BioChem J, 1985, 231:321-328) as evidenced by the teachings of USP 4,339,433 to Kartinos et al. and USP 6,235,305 to Mullins et al.

The Appellant has demonstrated that claims 1, 6, 22, 25 and 27 are novel and not anticipated by Martyn et al. (BioChem J, 1985, 231:321-328) as evidenced by the teachings of USP 4,339,433 to Kartinos et al. and USP 6,235,305 to Mullins et al.

The Examiner maintained the rejection of claims 1, 6, 22, 25 and 27 under 35 U.S.C. § 102(b), on the grounds that Martyn *et al.* teaches "...a method for preparing for intraductal retrieval of fluid, cells and/or other material from a breast duct of a patient comprising administering intraductally to the patient prolactin as either an emulsion or an aqueous solution, made by dissolving prolactin in NaOH and diluting with phosphate buffered saline containing Blue Dextran (a nonabsorbable biocompatible solution, as evidenced by the teachings of Kartinos and Mullins)." (Final Office Action of March 14, 2007; page 13) The Appellant respectfully disagrees.

To establish a case of *prima facie* anticipation, the single reference cited by the Examiner must describe and enable the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by persons or ordinary skill in the field of the invention. (Crown Operations Int, Ltd. V. Solutia Inc., 289 F.3d 1367, 1375, 62 USPQ2d 1917, 1921 (Fed Cir. 1984)).

Claim 1 recites a method for preparing for intraductal retrieval of fluid, cells and/or other material from a breast duct of a patient, comprising administering intraductally to the patient an agent that increases retrievable ductal fluid from a breast duct, wherein the agent is selected from the

group consisting of a hypotonic solution, a buffered solution, a nonabsorbable biocompatible solution, a protein, a colloid, a sugar, a polymer, mannitol, sorbitol, glucose, glycerol, sucrose, raffinose, fructose, lactulose, polyethyleneglycol (PEG), maltodextrin, dextran, dextran 70, hydroxyethyl starch, fluid gelatin, a synthetic colloid, an antibody, a binding protein, albumin, a hormone, a natural herb, an extract from a natural herb, silymarin, a surfactant, a growth factor, oxytocin, prolactin, an organic molecule, a muscle relaxant, and a ductal orifice dilator.

Martyn *et al.* describes an in vivo experiment in rabbits to measure the effect of prolactin and progesterone on lipogenic-enzyme activity and glycerolipid synthesis. The Examiner argued that "...Martyn teaches a method for increasing retrievable intraductal fluid, cells and/or other material from a breast duct of a patient comprising the intraductal administration of a nonabsorbable biocompatible solution or emulsion comprising prolactin and progesterone, which increases secretion of ductal fluid into the breast duct." (Final Office Action of March 14, 2007; page 13-14) The Appellant respectfully disagrees.

Martyn *et al.* does not teach or suggest a method of using a nonabsorbable biocompatible solution to increase retrievable ductal fluid from a breast duct. The method of claim 1 teaches the specific steps of administering intraductally to the patient an agent that increases secretion of ductal fluid into a breast duct wherein the agent is selected from the group consisting of a hypotonic solution, a buffered solution, a nonabsorbable biocompatible solution, a protein, a colloid, a sugar, a polymer, mannitol, sorbitol, glucose, glycerol, sucrose, raffinose, fructose, lactulose, polyethyleneglycol (PEG), maltodextrin, dextran, dextran 70, hydroxyethyl starch, fluid gelatin, a synthetic colloid, an antibody, a binding protein, albumin, a hormone, a natural herb, an extract

from a natural herb, silymarin, a surfactant, a growth factor, oxytocin, prolactin, an organic molecule, a muscle relaxant, and a ductal orifice dilator. It is clear that claim 1 teaches the use of an agent which, when administered to the breast duct, must not only increase secretion of ductal fluid into a breast duct, but must also be selected from the group of agents listed in the Markush group. From this analysis, it is apparent that the Examiner's reliance of Martyn *et al.* to teach all the elements of claim 1 is misplaced. The Examiner first argued that Martyn *et al.* teaches administering prolactin as either an emulsion or an aqueous solution to increase retrievable intraductal fluid from a breast duct. There is no evidence presented by the Examiner that Martyn *et al.* teaches or suggests that the intraductal administration of prolactin increases intraductal fluid. Martyn *et al.* teaches that the administration of prolactin increases fatty acid and glycerolipid synthesis.

The Examiner then argued that the nonabsorbable biocompatible solution in Martyn *et al.* is made by dissolving prolactin in NaOH and diluting with phosphate buffered saline containing Blue Dextran. As mentioned previously, Claim 1 of the present invention specifically recites a method of administering a nonabsorbable biocompatible agent which, when administered to the breast duct, increases secretion of ductal fluid into a breast duct. The nonabsorbable biocompatible agent in the Examiner's argument is Blue Dextran which is not an agent which has been shown to increase the secretion of ductal fluid into a breast duct. In fact, as evidenced on page 326, Column 1, lines 28-41, as well as Table 4 on page 326 of Martyn *et al.*, Blue Dextran mixed with Phosphate-buffered saline had no effect on fatty acid synthesis. There is no evidence of record that teaches or suggests that the nonabsorbable biocompatible agent recited by the Examiner (Blue Dextran) when administered to a breast duct, increases secretion of ductal fluid into the breast duct. The Examiner cannot recite

a prior art reference that contains two agents (prolactin and Blue Dextran) and then argue that both agents are acting as one for the purposes of anticipation. Therefore, the method of the present invention cannot be anticipated by the method of Martyn et al. because there is nothing in Martyn *et al.* that suggests any agent that increases retrievable ductal fluid from a breast duct.

Accordingly, the requirements for anticipation have not been met, and the rejection of claims 1, 6, 22, 25 and 27 under 35 U.S.C. §102(b), should be reversed.

Issue 4—Whether Claims 1, 6, 22, 25 and 27 are unpatentable under 35 U.S.C. § 102(b) as being anticipated by Falconer et al. (Endocrinology, 1977, 101(1):181-186) as evidenced by the teachings of U.S. Patent No. 4,339,433 to Kartinos et al., and U.S. Patent No. 6,235,305 to Mullins.

The Appellant has demonstrated that claims 1, 6, 22, 25 and 27 are novel and not anticipated by Falconer *et al.* (Endocrinology, 1977, 101(1):181-186) as evidenced by the teachings of USP 4,339,433 to Kartinos *et al.* and USP 6,235,305 to Mullins *et al.*

The Examiner maintained the rejection of claims 1, 6, 22, 25 and 27 under 35 U.S.C. § 102(b), on the grounds that Falconer *et al.* teaches "...a method for preparing for intraductal retrieval of fluid, cells and/or other material from a breast duct of a patient comprising administering intraductally to the patient prolactin (a growth hormone), ouabain or both dissolved in a solution of [Na+], [K+] and [Cl-] containing Dextran Blue 2000 (a nonabsorbable biocompatible solution, as evidenced by the teachings of Kartinos and Mullins)." (Final Office Action of March 14, 2007; page 14-15) The Appellant respectfully disagrees.

To establish a case of *prima facie* anticipation, the single reference cited by the Examiner must describe and enable the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by persons or ordinary skill in the field of the invention. (Crown Operations Int, Ltd. V. Solutia Inc., 289 F.3d 1367, 1375, 62 USPQ2d 1917, 1921 (Fed Cir. 1984)).

Claim 1 recites a method preparing for intraductal retrieval of fluid, cells and/or other material from a breast duct of a patient, comprising administering intraductally to the patient an

agent that increases retrievable ductal fluid from a breast duct, wherein the agent is selected from the group consisting of ... a nonabsorbable biocompatible solution. The Examiner argued that Falconer *et al.* anticipates Claim 1 because it shows that increasing the amounts of prolactin increases the water content of wet tissue in treated mammary gland tissue. The Appellant respectfully disagrees.

Falconer *et al.* describes an *in vivo* experiment in rabbits to measure the effect of prolactin and ouabain on mammary alveolar tissue. Falconer *et al.* does not teach a method for administering intraductally to a patient an agent that increases retrievable ductal fluid from a breast duct. As evidenced on page 185, Column 1, lines 4-8, Falconer *et al.* explicitly states that "From these results we conclude that *in vitro* and *in vivo* prolactin has significant influence upon Na+ and K+ content (and therefore Na+/K+ ratio) of mammary alveolar tissue". Alveolar tissue is comprised of glandular tissue and secreting cells that surround the ductal system (emphasis added) (see page 182, Column 2, lines 29-33). Therefore, Falconer *et al.* does not disclose that prolactin and ouabain increases water content in breast ducts, but instead, discloses an increase in water content of the surrounding alveolar tissue. The Examiner has provided no evidence that Falconer *et al.* teaches or suggests an agent that increases retrievable ductal fluid from a breast duct.

The Examiner argued that "...Falconer *et al.* teaches a method for increasing intraductal retrieval of fluid, cells and/or other material from a breast duct of a patient, comprising administering intraductally to the patient prolactin (a growth hormone), ouabain or both dissolved in a solution of [Na+], [K+], and [Cl-] containing Dextran Blue 2000 (a nonabsorbable biocompatible solution)...." (Final Office Action of March 14, 2007; page 14-15) The Appellant respectfully

disagrees.

As mentioned previously, Falconer *et al.* does not teach a method for administering intraductally to a patient an agent that increases retrievable ductal fluid from a breast duct. Contrary to the Examiner's argument, Falconer *et al.* does not teach a method of using a nonabsorbable biocompatible solution (Dextran Blue 2000) as an agent to increase retrievable ductal fluid from a breast duct. There is nothing Falconer *et al.* to suggest that Dextran Blue 2000 can increase the amount of fluid in a breast duct. In fact, as evidenced on page 182, Column 2, lines 13-15, Falconer *et al.* explicitly states that Dextran Blue 2000 is used to "...locate the injected glands at the time of removal". Likewise, there is no evidence that prolactin can increase the amount of fluid in a breast duct. Therefore, the method of the present invention cannot be inherent to the method of Falconer *et al.*, because there has been no evidence provided that Falconer *et al.* teaches or suggests an agent that increases retrievable ductal fluid from a breast duct.

Lastly, the Examiner has not provided any reasoning as to why dependent claim 25 is anticipated by Falconer *et al.* The Examiner has no addressed the Appellant's arguments that there is no teaching or suggestion in Falconer *et al.* of the use of polyethyleneglycol (PEG), maltodextrin, dextran, or dextran 70 to increase the amount of fluid in a breast duct.

Accordingly, the requirements for anticipation have not been met, and the rejection of claims 1, 6, 22, 25 and 27 under 35 U.S.C. §102(b), should be reversed.

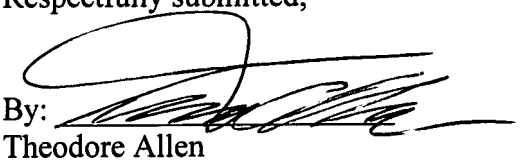
CONCLUSION

In view of the arguments presented above, the Appellant contend that each of claims 90-100 is patentable. Therefore, reversal of the rejections under 35 U.S.C. §103(a) is respectfully solicited.

A one month extension of time is hereby requested. It is not believed that any additional extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 502855 referencing attorney docket number 12.024011.

Respectfully submitted,

Customer No, 0000 38732

By: 

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APPENDIX A: PENDING CLAIMS

1. A method for increasing retrievable intraductal fluid, cells and/or other material from a breast duct of a patient, comprising:

administering intraductally to the patient an agent that increases secretion of ductal fluid into a breast duct, wherein the agent is selected from the group consisting of a hypotonic solution, a buffered solution, a nonabsorbable biocompatible solution, a protein, a colloid, a sugar, a polymer, mannitol, sorbitol, glucose, glycerol, sucrose, raffinose, fructose, lactulose, polyethyleneglycol (PEG), maltodextrin, dextran, dextran 70, hydroxyethyl starch, fluid gelatin, a synthetic colloid, an antibody, a binding protein, albumin, a hormone, a natural herb, an extract from a natural herb, silymarin, a surfactant, a growth factor, oxytocin, prolactin, an organic molecule, a muscle relaxant, and a ductal orifice dilator.

6. A method as in claim 1, wherein the agent is in a state selected from the group consisting of a non-liquid, a gel, an emulsion, a gas and a semi-solid.

22. The method of claim 1 wherein the agent is a nonabsorbable biocompatible solution.

23. The method of claim 1, wherein the agent is selected from the group consisting of mannitol and sorbitol.

24. The method of claim 1, wherein the agent is selected from the group consisting of a sugar, glucose, sucrose, raffinose, fructose, and lactulose.

25. The method of claim 1, wherein the agent is selected from the group consisting of polyethyleneglycol (PEG), maltodextrin, dextran, and dextran 70.

26. The method of claim 1, wherein the agent is an extract from a natural herb.

27. The method of claim 1, wherein the agent is selected from the group consisting of a growth factor, oxytocin, and prolactin.

APPENDIX B: EVIDENCE

NONE

APPENDIX C: RELATED PROCEEDINGS

NONE